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| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | EXAMINER LEROUX, ETIENNE PIERRE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/214,519

Applicant(s)

HASHIZUME ET AL.

Examiner

Etienne P LeRoux

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 39.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 40.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat No 5,508,834 issued to Yamada et al (hereafter Yamada '834).

Claim 1:

Yamada '834 discloses:

- an optical modulation device [Fig 2, 201]
- a transparent plate [Fig 2, 207] bonded to and in contact with, substantially the entire at least one surface of the optical modulation device

Claim 4:

Yamada '834 discloses:

- a light source [Fig 2, 208];
- an optical modulation device [Fig 2, 201] that modulates a light flux emitted from the light source according to image information

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- a projection unit [Fig 2, 209] that magnifies and projects the light flux modulated by said transparent plate [Fig 2, 206] formed on a light emitting surface of said optical modulation device, the transparent plate formed on and in contact with, substantially the entire light emitting surface of said optical modulation device [Fig 2]

Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat No 5,734,454 issued to Omae et al (hereafter Omae '454).

Claim 1:

Omae '454 discloses:

- an optical modulation device [Fig 1, 13 and Fig 22, 152 and col 8, lines 31-38]
- a transparent plate [Fig 22, 153] bonded to and in contact with, substantially the entire at least one surface of the optical modulation device

Claim 4:

Omae '454 discloses:

- a light source [Fig 22, 171];
- an optical modulation device [Fig 1, 13 and Fig 22, 152 and col 8, lines 31-38] that modulates a light flux emitted from the light source according to image information
- a projection unit [Fig 22, 174] that magnifies and projects the light flux modulated by said optical modulation device,
- transparent plate [Fig 22, 153] formed on a light emitting surface of said optical modulation device, the transparent plate formed on and in contact with, substantially the entire light emitting surface of said optical modulation device [Fig 22]

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omae '454 in view of Yamada '834.

Claim 2:

Omae '454 discloses the elements of claim 1 as noted above.

Omae '454 fails to disclose a polarizer bonded to said transparent plate.

Yamada '834 discloses a polarizer bonded to said transparent plate [Fig 5, 8]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include a polarizer bonded to said transparent plate as taught by Yamada '834.

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The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of providing polarized light energy to the modulator.¹

Claim 6:

Omae '454 discloses the elements of claim 4 as noted above.

Omae '454 fails to disclose said transparent plate having a thickness and said projection unit having a focal depth, and the thickness of said transparent plate being set larger than the focal depth of said projection unit.

Yamada '834 discloses said transparent plate having a thickness and said projection unit having a focal depth, and the thickness of said transparent plate being set larger than the focal depth of said projection unit [col 4, lines 15-25].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include said transparent plate having a thickness and said projection unit having a focal depth, and the thickness of said transparent plate being set larger than the focal depth of said projection unit as taught by Yamada '834.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of preventing dust or fluff causing an adverse effect on the image quality [col 4, lines 15-24].

Claim 7:

Omae '454 discloses the elements of claim 4 as noted above.

Omae '454 fails to disclose a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin

¹ Refer Pub No US 2003/0147137 issued to Li, paragraphs 3 and 4

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and having an optical axis, and the optical axis of said transparent plate substantially aligns with the optical axis of said polarizer.

Yamada '834 discloses a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said transparent plate substantially aligns with the optical axis of said polarizer [col 6, line 60 and Fig 7, 9 and Fig 7, 7 and Fig 2, 209].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamada '834 to include a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said transparent plate substantially aligns with the optical axis of said polarizer as taught by Yamada '834.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of providing a projection apparatus.

Claim 8:

Omae '454 discloses the elements of claims 4 and 7 as noted above.

Omae '454 fails to disclose said polarizer comprising a polarizing layer and a pair of substrates that sandwich said polarizing layer and are made of a substrate material, and said transparent plate being made of the substrate material used in making said substrates.

Yamada '834 discloses said polarizer comprising a polarizing layer and a pair of substrates that sandwich said polarizing layer and are made of a substrate material, and said transparent plate being made of the substrate material used in making said substrates [Fig 6, 8 and Fig 6, 6 and Fig 6, 2]

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include said polarizer comprising a polarizing layer and a pair of substrates that sandwich said polarizing layer and are made of a substrate material, and said transparent plate being made of the substrate material used in making said substrates as taught by Yamada '834.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of supporting the polarizing layer adjacent to the liquid crystal.

Claim 9:

Omae '454 discloses the elements of claims 4 and 7 as noted above.

Omae '454 fails to disclose a polarizer bonded to said transparent plate.

Yamada '834 discloses a polarizer bonded to said transparent plate [Fig 5, 8]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include a polarizer bonded to said transparent plate as taught by Yamada '834.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of providing polarized light energy to the modulator.²

Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omae '454 in view of US Pat No 3,910,682 issued to Arai et al (hereafter Arai '682).

Claim 3:

Omae '454 discloses the elements of claim 1 as noted above.

² Refer Pub No US 2003/0147137 issued to Li, paragraphs 3 and 4

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Omae '454 fails to disclose said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection.

Arai '682 discloses said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection [Fig 2, 2]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection as taught Arai '682.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of omitting the washing step [col 2, lines 45-55].

Claim 10:

Omae '454 discloses the elements of claim 4 as noted above.

Omae '454 fails to disclose said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection.

Arai '682 discloses said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection [Fig 2, 2]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection as taught Arai '682.

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The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of omitting the washing step [col 2, lines 45-55].

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Omae '454 in view of US Pat No 5,865,521 issued to Hashizume et al (hereafter Hashizume '521).

Claim 5:

Omae '454 discloses the elements of claim 4 as noted above.

Omae '454 fails to disclose an antireflection film formed on at least one surface of said transparent plate.

Hashizume '521 discloses an antireflection film formed on at least one surface of said transparent plate [Fig 12, 632].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include an antireflection film formed on at least one surface of said transparent plate as taught by Hashizume '521.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of eliminating reflections from the substrate in order to provide an efficient reflection-type liquid crystal device [col 21, lines 10-55].

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omae '454 in view of US Pat No 5,868,485 issued to Fujimori et al (hereafter Fujimori '485).

Claim 11:

Omae '454 discloses the elements of claim 4 as noted above.

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Omae '454 fails to disclose a color synthesizing prism, a mounting frame plate composed of a first frame member and a second frame member that sandwich said optical modulation device a fixed frame plate in a fixed contact with a light incident surface of said color synthesizing prism; and an intermediate frame plate sandwiched between said mounting frame plate and said fixed frame plate.

Fujimori '485 discloses a color synthesizing prism, a mounting frame plate composed of a first frame member and a second frame member that sandwich said optical modulation device a fixed frame plate in a fixed contact with a light incident surface of said color synthesizing prism; and an intermediate frame plate sandwiched between said mounting frame plate and said fixed frame plate [Fig 5, 22 and Fig 5, 52 and Fig 5, 55 and Fig 5, 40R and Fig 5, 54 and Fig 5, 53]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include a mounting frame plate composed of a first frame member and a second frame member that sandwich said optical modulation device a fixed frame plate in a fixed contact with a light incident surface of said color synthesizing prism; and an intermediate frame plate sandwiched between said mounting frame plate and said fixed frame plate as taught by Fujimori '485.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of mounting the liquid crystal panel unit [Fig 5].

Claim 12:

Omae '454 discloses the elements of claims 4 and 11 as noted above.

Omae '454 fails to disclose said mounting frame plate being made of a resin containing glass fiber.

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Fujimori '485 discloses said mounting frame plate being made of a resin containing glass fiber [col 10, line 15].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include said mounting frame plate being made of a resin containing glass fiber as taught by Fujimori '485.

The ordinarily skilled artisan would have been motivated to modify Omae '485 per the above for the purpose of using a mounting plate which can be easily manufactured.

Claim 13:

Omae '454 discloses the elements of claims 4 and 11 as noted above.

Omae '454 fails to disclose said mounting frame plate being made of metal.

Fujimori '485 discloses said mounting frame plate being made of metal [col 10, lines 40-48].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Omae '454 to include said mounting frame plate being made of metal as taught by Fujimori '485.

The ordinarily skilled artisan would have been motivated to modify Omae '454 per the above for the purpose of using a mounting plate that can withstand heat.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 6,007,205 issued to Fujimori (hereafter Fujimori '205) in view of Yamada '834.

Claim 14:

Fujimori '205 discloses:

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- a light source [Fig 7,8]
- a plurality of optical modulation devices that modulate a light flux emitted from the light source according to image information [Fig 12, 925R, 925G, 925B];
- a prism that synthesizes the light flux modulated by said plurality of optical modulation devices [Fig 11, 910];
- a projection unit that magnifies and projects the light flux synthesized by said prism [Fig 8, 6]
- a partition that surrounds said plurality of optical modulation devices and said prism via an air layer and thereby separates said plurality of optical modulation devices said prism from said light source and said projection unit [Fig 12, 1500],
- a light outgoing window that emits the light flux modulated by said at least one optical modulation device therefrom. [Fig 8]

Fujimori '205 discloses the elements as noted above.

Fujimori '205 fails to disclose a transparent plate fitted in a light incident window corresponding to a light incident surface of at least one optical modulation device.

Yamada '834 discloses a transparent plate fitted in a light incident window corresponding to a light incident surface of at least one optical modulation device

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fujimori '205 to include a transparent plate fitted in a light incident window corresponding to a light incident surface of at least one optical modulation device as taught by Yamada '834.

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The ordinarily skilled artisan would have been motivated to modify Fujimori '205 per the above for the purpose of reducing the adverse affect of foreign matter on the image quality [col 4, lines 20-24].

Claim 15:

Fujimori '205 discloses a fan that circulates air located inside said partition [Fig 9, 15B].

Claim 16:

Fujimori '205 discloses the elements of claim 14 as noted above.

Fujimori '205 fails to disclose a polarizer bonded to said transparent plate.

Yamada '834 discloses a polarizer bonded to said transparent plate [Fig 5, 8 and Fig 5, 6]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fujimori '205 to include a polarizer bonded to said transparent plate as taught by Yamada '834.

The ordinarily skilled artisan would have been motivated to modify Fujimori '205 per the above for the purpose of reducing the adverse effect of foreign matter o the image quality [col 4, lines 20-24]

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fujimori '205 and Yamada '834 and further in view of Arai '682.

Claim 17:

The combination of Fujimori '205 and Yamada '834 discloses the elements of claim 14 as noted above.

The combination of Fujimori '205 and Yamada '834 fails to disclose said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection.

Arai '682 discloses said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection [Fig 2, 2]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Fujimori '205 and Yamada '834 to include said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection as taught Arai '682.

The ordinarily skilled artisan would have been motivated to modify the combination of Fujimori '205 and Yamada '834 for the purpose of omitting the washing step [col 2, lines 45-55].

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada '834 in view of Fujimori '205.

Claim 18:

Yamada '834 discloses:

- a light source [Fig 2, 208];
- an optical modulation device that modulates a light flux emitted from the light source according to image information [Fig 2 and Fig 7 and Fig 5,1 and col 1, lines 33-46 and col 1, lines 60-67];

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- a transparent plate bonded to a light emitting surface of said optical modulation device, the transparent plate bonded to, and in contact with, substantially the entire light emitting surface of said optical modulation device [Fig 4, 8];

Fig 2, 206

Yamada '834 discloses the elements as noted above.

Yamada '834 fails to disclose a power supply unit; an interface circuit; a control circuit that controls the optical modulation device; and an outer casing that accommodates the light source, the optical modulation device, the transparent plate, the power supply unit, the interface circuit, and the control circuit.

Fujimori '205 discloses a power supply unit [Fig 2, 7]; an interface circuit [Fig 2, 11]; a control circuit [Fig 2, 12] that controls the optical modulation device; and an outer casing [Fig 1A, 2] that accommodates the light source, the optical modulation device, the transparent plate, the power supply unit, the interface circuit, and the control circuit.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamada '834 to include a power supply unit; an interface circuit; a control circuit that controls the optical modulation device; and an outer casing that accommodates the light source, the optical modulation device, the transparent plate, the power supply unit, the interface circuit, and the control circuit as taught by Fujimori '205.

The ordinarily skilled artisan would have been motivated to modify Yamada '834 per the above for the purpose of providing a projection display apparatus.

Claim 19:

Yamada '834 discloses:

- a light source [Fig 2, 208];

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- an optical modulation device that modulates a light flux emitted from the light source according to image information [Fig 2 and Fig 7 and Fig 5,1 and col 1, lines 33-46 and col 1, lines 60-67];
- a transparent plate bonded to, and in contact with, substantially the entire substantially the length of a light emitting surface of said optical modulation device [Fig 4, 8];
- a projection unit that magnifies and projects the light flux modulated by said optical modulation device [Fig 2, 209]

Yamada '834 discloses the elements as noted above.

Yamada '834 fails to disclose a partition that surrounds said optical modulation device via an air layer and thereby separates said optical modulation device from said light source and said projection unit; a power supply unit; an interface circuit; a control circuit that controls the optical modulation device; and an outer casing that accommodates the light source, the optical modulation device, the partition, the power supply unit, the interface circuit, and the control circuit.

Fujimori '205 discloses a partition [Fig 12, 1500] that surrounds said optical modulation device via an air layer and thereby separates said optical modulation device from said light source and said projection unit; a power supply unit [Fig 2, 7]; an interface circuit [Fig 2, 11]; a control circuit [Fig 2, 12] that controls the optical modulation device; and an outer casing [Fig 1A, 2] that accommodates the light source, the optical modulation device, the partition, the power supply unit, the interface circuit, and the control circuit

Response to Arguments

Applicant's arguments filed July 14, 2003, have been fully considered but they are not persuasive.

Applicant argues on page 8:

Applicant states on page 8, " Regarding independent claims 1 and 4, as pointed out at the February 5, 2003 personal interview, Yamada does not disclose, teach or suggest 'a transparent plate bonded to, and in contact with, substantially the entire at least one surface of the optical modulation device', as recited in claim 1, or 'a transparent plate formed on a light emitting surface of said optical modulation device, the transparent plate formed on, and in contact with substantially the entire light emitting surface of said optical modulation device' as recited in claim 4. This feature shown at least in Figs, 6A and 6B of the application."

Examiner Responds:

Examiner is not persuaded. Applicant is referred to the teaching provided by Yamada '834 in Figure 2. Examiner maintains, at least, polarizing plate, item 206, and optical modulation device, item 201, respectively reads on 'a transparent plate bonded to, and in contact with, substantially the entire at least one surface of the optical modulation device.' Yamada '834 discloses in column 1, lines 47-53 the following:

A task to be solved by the present invention will now be briefly explained with reference to FIG. 2. A liquid crystal cell 201 has a structure in which a TFT substrate 202 and a CF substrate 203 are bonded together by a sealant 204 and a liquid crystal layer 205 is held in a gap between both the substrates. **Respective polarizing plates 206 and 207 are attached directly to outer surfaces of the two substrates.**

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Supra Office Action therefore, maintains the rejection of above elements with reference to Yamada '834. Furthermore, in an attempt to expedite prosecution by hopefully limiting unnecessary arguments, examiner provides above additional rejection of claims 1 and 4. Claims 1 and 4 are therefore, also rejected as being anticipated by Omae '454. Figure 22 of Omae '454, as explained in supra Office Action clearly reads on 'a transparent plate bonded to, and in contact with, substantially the entire at least one surface of the optical modulation device', as recited in claim 1, or 'a transparent plate formed on a light emitting surface of said optical modulation device, the transparent plate formed on, and in contact with substantially the entire light emitting surface of said optical modulation device' as recited in claim 4.

Applicant argues on page 9:

Applicant states on page 9,"Regarding the rejection of independent claims 18 and 19 under 35 U.S.C. § 103(a), the combination of Yamada and Fujimori does not teach or suggest a projector having a transparent plate bonded to, and in contact with, substantially, the entire length of a light emitting surface of a optical modulation device, as set forth in claims 18 and 19."

Examiner responds:

Examiner is not persuaded. Applicant is referred to the teaching provided by Yamada '834 in Figure 2. Examiner maintains, at least, polarizing plate, item 206, and optical modulation device, item 201, respectively reads on 'a transparent plate bonded to, and in contact with, substantially the entire at least one surface of the optical modulation device.' Yamada '834 discloses in column 1, lines 47-53 the following:

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A task to be solved by the present invention will now be briefly explained with reference to FIG. 2. A liquid crystal cell 201 has a structure in which a TFT substrate 202 and a CF substrate 203 are bonded together by a sealant 204 and a liquid crystal layer 205 is held in a gap between both the substrates. **Respective polarizing plates 206 and 207 are attached directly to outer surfaces of the two substrates.**

Furthermore, the following is taken from Description of Related Art on page 8 of

Applicant's specification:

Accordingly, it may be possible to place the polarizer apart from the light outgoing surfaces of the liquid crystal modulation element. However, if the polarizer is simply placed apart from the light outgoing surfaces, there is a fear that the switching element in the liquid crystal modulation element may malfunction due to a light flux reflected by the light outgoing surfaces of the liquid crystal modulation element. Moreover, there is a fear that dust or the like may be caused by an air flow formed inside the projection display device to adhere to the light outgoing surfaces of the liquid crystal modulation element, and it may make high-quality image projection impossible.

The following is taken from Summary of the Invention on page 8 of Applicant's specification:

Preferably, the thickness of the transparent plate is set larger than the focal length of the projection means. When the thickness is set this, even if dust or the like adheres to the surface of the transparent plate, it is blurred and made inconspicuous on the projection plane.

Instant invention is thus concerned with preventing dust or other foreign material on the light outgoing surfaces of the liquid crystal modulation element from being projected onto the projection plane. The important element is the transparent plate and in particular the thickness of the transparent plate relative to the focal length of the projection means so that dust or other foreign matter is not projected onto the projection plane.

This essential element of instant invention is not claimed, i.e., the thickness of the transparent plate is not even suggested in claims 1 through 19. For no apparent reason, Applicant instead claims the degree of contact of the transparent plate. The degree of contact of

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the transparent plate is not considered in Applicant's specification and certainly no reasoning is given why the degree of contact should be, for argument's sake, 25 percent, 50 percent 75 percent or substantially the entire surface. The important factor is as mentioned above, the thickness of the transparent plate. Additionally, examiner maintains that a transparent plate bonded to, and in contact with, substantially the entire length of its surfaces is well-known and expected in the art. In this regards, examiner notes that Yamada '834 in Figures 2, 4 and 5 and Omae '454 in Figure 22 discloses "a transparent plate bonded to, and in contact with, substantially, the entire length of a light emitting surface of a optical modulation device"

Applicant argues on page 9:

Applicant states on page 9, "Regarding claims 14-17, Fujimori '205 in combination with Yamada does not teach or suggest 'a partition having a transparent plate fitted in a light incident window corresponding to a light incident surface of at least one optical modulation device as recited in independent claim 14."

Examiner responds:

Examiner is not persuaded. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a partition having a transparent plate fitted in a light incident window corresponding to a light incident surface of at least one optical modulation device) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (703) 305-0620.

The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Patent related correspondence can be forwarded via the following FAX number (703) 872-9306

Etienne LeRoux

November 7, 2003



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